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Vamsapriya jinniuensis sp. nov., and a first record of *Garnaudia elegans* from southern China

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Abstract —A new species, *Vamsapriya jinniuensis*, is described and illustrated from specimens collected on dead stems in Hainan Province. The fungus is unique in producing catenate, phragmosporous, obclavate conidia on synnematous conidiophores with non-cicatrized, monotretic conidiogenous cells. *Garnaudia elegans* is newly recorded from China.

Key words —hyphomycetes, taxonomy, *Xylariaceae*

Introduction

During our ongoing survey of microfungi associated with woody debris in the forests of southern China, two specimens with the morphological characteristics of *Vamsapriya* Gawas & Bhat (Gawas & Bhat 2006) and *Garnaudia* Borowska (Borowska 1977) were collected on dead stems. *Vamsapriya jinniuensis* is described here as a new species, and *Garnaudia elegans* represents a new record for China. *Vamsapriya* currently includes six species: *V. bambusicola* D.Q. Dai & al., *V. breviconidiophora* Jun F. Li & al., *V. camagueyensis* (R.F. Castañeda) R.F. Castañeda & al., *V. indica* Gawas & Bhat, *V. khunkonensis* D.Q. Dai & al., and *V. mahabaleshwarensis* J. Pratibha & Bhat (Gawas & Bhat 2006, Pratibha & Bhat 2008, Dai & al. 2015, Castañeda-Ruiz & al. 2017, Hyde & al. 2017). Specimens are deposited in the

Herbarium of the Department of Plant Pathology, Shandong Agricultural University, Taian, China (HSAUP) and the Mycological Herbarium, Institute of Microbiology, Chinese Academy of Sciences, Beijing, China (HMAS).

Vamsapriya jinniuensis Yin Ling & X.G. Zhang, **sp. nov.** Fig. 1

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Differs from *Vamsapriya indica* by its longer, narrower, obclavate conidia.

Type: China, Hainan Province: Jinniuling, on dead stems of an unidentified broadleaf tree, 22 Feb. 2017, H.H. Li (**Holotype**, HSAUP H10242; **isotype**, HMAS 245647).

Etymology: *jinniuensis*, in reference to the type locality, Jinniuling.

Colonies on natural substrate effuse, dark brown to black. Mycelium mostly immersed in the substratum, composed of subhyaline, septate, branched, smooth hyphae. Synnemata erect, rigid, dark brown, composed of compact parallel conidiophores, ≤875 µm high, 36.5–103.5 µm diam. Conidiophores distinct, dark brown, smooth, septate, branched, 4–4.5 µm diam. Conidiogenous cells monotretic, uncicatrized, integrated or discrete, terminal, clavate, slightly curved toward the exterior, 12–16 × 3.8–4.5 µm. Conidia dry, catenate, acrogenous, brown, smooth, simple, obclavate, 9–13-euseptate, constricted at the septa, 76–118.5 × 2.5–5 µm.

Comments – *Vamsapriya* was established by Gawas & Bhat (2006), with *V. indica* as type species, to accommodate conidial fungi with catenate, phragmosporous conidia on synnematous conidiophores with non-cicatrized, monotretic, conidiogenous cells (Gawas & Bhat 2006). The genus is similar to *Didymobotryum* Sacc. and *Podosporium* Schwein. in having synnematous conidiomata and monotretic conidiogenous cells. However, conidia in *Didymobotryum* are catenate, ellipsoidal to cylindrical, and 1-septate, while in *Podosporium* they are solitary, obclavate, and multiseptate. *Vamsapriya* combines conidial morphology from both genera, bearing catenate, cylindrical to vermiform, multiseptate conidia.

Vamsapriya indica differs from *V. jinniuensis,* which has shorter, wider, cylindrical conidia with fewer septa (10–80 × 4–6 µm, 2–12-euseptate; Gawas & Bhat 2006). The other five *Vamsapriya* species also all differ from *V. jinniuensis* by their shorter, wider conidia: *V. bambusicola* 8–45 × 4.5–9.5 µm (Dai & al. 2015); *V. breviconidiophora* 25.2–32.4 × 7.9–10.2 µm (Hyde & al. 2017); *V. camagueyensis* 45–65 × 4–6 µm (Castañeda-Ruiz & al. 2017); *V. khunkonensis* 17.5–35 × 6–10 µm (Dai & al. 2015); and *V. mahabaleshwarensis* 5–25 × 4–9 µm (Pratibha & Bhat 2008).

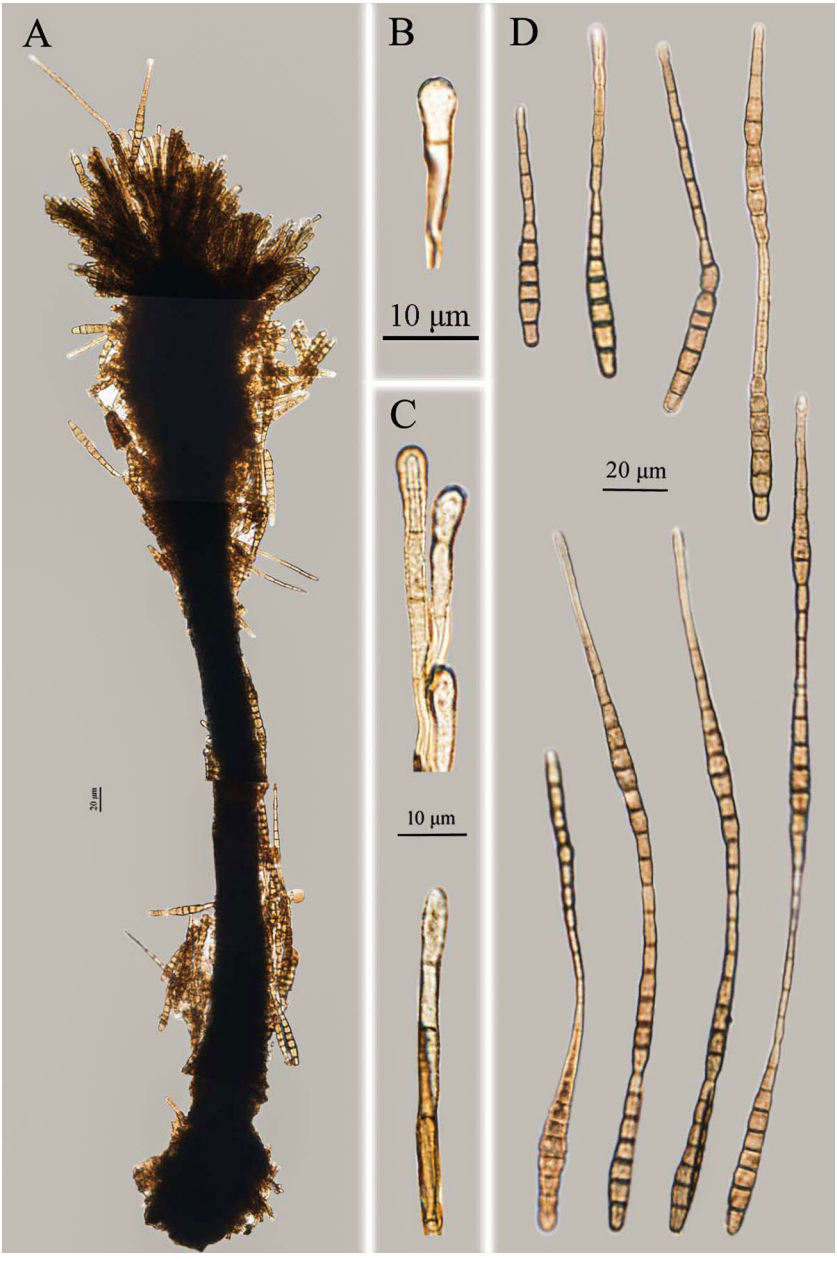

Fig. 1. *Vamsapriya jinniuensis* (holotype, HSAUP H10242). A. Synnema; B, C. Conidiophores and conidiogenous cells; D. Conidia.

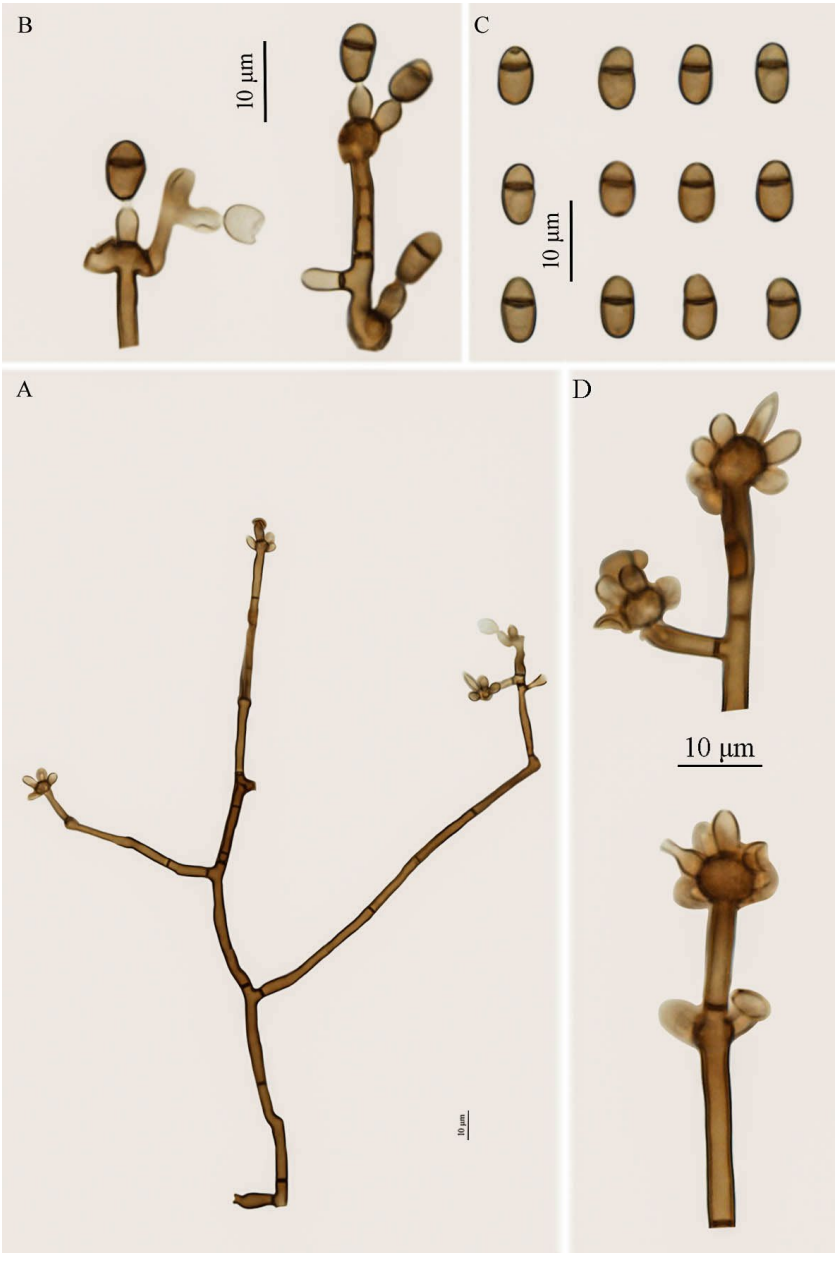

Fig. 2. *Garnaudia elegans* (HSAUP H10237). A. Conidiophore, conidiogenous cells, and conidia; B. Conidiogenous cells and conidia; C. Conidia; D. Conidiogenous cells.

Garnaudia elegans Borowska, Acta Mycol. 13(1): 170, 1977. Fig. 2

Conidiophores macronematous, mononematous, brown, becoming paler towards the apex, erect, flexuous, simple or branched, up to 237.5 µm long, 2.5–4 µm wide towards the base. Conidiogenous cells monoblastic, discrete, determinate, ampuliform or lageniform, truncated, subhyaline or pale yellowish brown, solitary or in groups, 4.5–5.6 µm long, 2–3 µm wide at the apex of each stipe or branch. Conidia solitary, dry, acrogenous, simple, ellipsoidal, oval or piriform, 1-septate, basal cell 2× longer than apical cell, evenly pigmented, smooth, 6.5–8.5 × 3–5 µm, sometimes with a basal hyaline marginal frill.

Specimen examined: **CHINA, Jiangxi Province**: Dayueshan, on dead stems of an unidentified broadleaf tree, 23 Dec. 2016, H.H. Li (HSAUP H10237).

Comments – *Garnaudia* was established by Borowska (1977) with *G. elegans* as type species. It is mainly characterized by macronematous, simple or branched conidiophores, and monoblastic, discrete, determinate, terminal and intercalary, verticillate, ampuliform or lageniform conidiogenous cells that produce solitary, acrogenous, simple, brown, continuous or septate conidia.

We report *Garnaudia elegans* for the first time from China. Our Chinese specimen is similar to the Polish protologue description, but its conidiophores are slightly shorter than those of the type material (≤300 µm; Borowska 1977).

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